



Heat Emergency Plan
2015 Version 1.0

Maryland Department of Health and Mental Hygiene

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Van T. Mitchell
Secretary,
Maryland Department of Health & Mental Hygiene

Laura Herrera, M.D., MPH,
Deputy Secretary for Public Health Services
Maryland Department of Health & Mental Hygiene

Sherry Adams, RN, B.S.
Director, Office of Preparedness & Response
Maryland Department of Health & Mental Hygiene

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Record of Changes

Date	Description	Draft Number
May 2011	First approved Plan	Version 1.0
July 2011	Revised Plan (Corrected minor errors)	Version 1.1
August 2011	Revised Plan Based on LHD Input and AAR	Version 1.2
May 2012	2012 Version 1.0 Approved	2012 Version 1.0
June 2012	Revised Definitions, added recommendations	2012 Version 1.1
July 2012	Revisions throughout plan and in Complex Heat Emergency after week-long incident	2012 Version 2.0
May 2013	Minor revisions throughout plan	2013 Version 1.0
May 2014	Revised Plan Prepared	2014 Version 1.0
May 2015	Draft Prepared	2015 Version 1.0

Acronyms

BHA - Behavioral Health Administration
DDA - Developmental Disabilities Administration
DHR - Maryland Department of Human Resources
DHMH - Maryland Department of Health and Mental Hygiene
EMA - Emergency Management Agency
LHD - Local Health Department
MDoA - Maryland Department of Aging
MEMA - Maryland Emergency Management Agency
MIEMSS - Maryland Institute for Emergency Medical Services Systems
NWS - National Weather Service
PSC - Public Service Commission
OCME - Office of the Chief Medical Examiner
OHCQ - Office of Health Care Quality

Summary

Purpose

The Maryland State Heat Emergency Plan, developed by the Maryland Department of Health and Mental Hygiene (DHMH), guides DHMH's actions during an extreme heat event and those of partner agencies and organizations, as defined below. This plan also provides guidance for Local Health Departments (LHDs) to support them as they fulfill their roles; however, it does not mandate that LHDs perform the suggested actions described.

Local Health Department Actions

All actions listed for LHDs in this plan are suggestions. Local jurisdictions each handle extreme heat events differently and the recommendations included here may not be applicable or practical for all LHDs or may be fulfilled by a different organization at the local level.

Phase 1: Pre-Summer

Triggers

- Pre-summer activities begin in April.

Surveillance

- The National Weather Service (NWS) determines the potential heat impact in the forecast. The Maryland Emergency Management Agency (MEMA) monitors data from the Sterling, Pittsburgh, Mt. Holly and Wakefield NWS stations.
- DHMH conducts daily analysis of syndromic surveillance data from emergency departments for indications of an increase in heat-related illness.

DHMH Actions

- DHMH will conduct an annual review of the DHMH Heat Emergency Plan and revise and update as necessary.
- DHMH will provide guidance and recommend best practices to aid jurisdictions in revising local Heat Emergency Plans as requested.
- DHMH will update the DHMH website with links to LHD information.
- DHMH will send plan to state and local partners for review.
- DHMH will distribute the revised Heat Emergency Plan to LHDs and partners.

Local Health Department Actions

- LHDs may consider conducting an annual review of the jurisdiction's plan.
- LHDs may coordinate with local Emergency Management Agencies (EMAs) to identify and renew expectations of local partners regarding operations activities and actions during an Extreme Heat Event.

- LHDs may engage school systems to review and set guidelines for conducting and cancelling outdoor activities, including field trips.
- LHDs may coordinate with EMAs to begin actively tracking large public events that could have severe public health consequences in an extreme heat event.
- LHDs may work with local agencies to ensure heat safety warnings are included with all summer event permits.
- LHDs may coordinate with other local agencies, such as the Department of Aging and Department of Social Services (DSS) to compile lists of individuals and facilities vulnerable to heat-related health issues.

Public Information

- DHMH and LHDs will review and revise written and electronic public information materials as appropriate.

Phase 2: Pre-Event

Triggers

- DHMH and jurisdictions should consider issuing a press release on or just prior to the day of the first Extreme Heat Event.
- DHMH and jurisdictions should launch heat planning activities by the third week in June if no Extreme Heat Events have occurred.

Surveillance

- DHMH and LHDs will monitor weather forecasts for the possibility of predicted weather conditions consistent with extreme heat.
- DHMH will distribute weekly reports with an analysis of the public health impact of heat-related illnesses occurring in Maryland. The weekly reports will be made available to the public on a predetermined day every week. These reports will include, but may not be limited to:
 - Temperature data via the NWS
 - Emergency Department visits for Heat-Related Illness through DHMH's syndromic surveillance system.
 - Heat-related death data reported by the Office of the Chief Medical Examiner (OCME).
- MEMA will coordinate with local Emergency Management Agencies (EMAs) to monitor large public events with the potential to create a mass casualty incident.
- MEMA will maintain situational awareness on power outages in the state.
- Maryland Institute for Emergency Medical Services Systems (MIEMSS) will monitor EMS systems statewide.

DHMH Actions

- DHMH will issue a press announcement just prior to the day of the first Extreme Heat Event or by the third week in June if no Extreme Heat Events have occurred.
- DHMH will review and revise this plan following any Extreme Heat Events as necessary.

- DHMH will review and revise public education materials to the public on the DHMH website.
- DHMH will contact nursing homes to promote summer preparedness, reminding them to check their generators and air conditioning systems and to report real or potential concerns and issues.
- DHMH will update the DHMH website with current LHD information.

Local Health Department Actions

- LHDs may monitor the NWS for local temperature data.
- LHDs may review planning activities and maintain situational awareness.

Demobilization

- DHMH will proceed to Phase 6 of this plan in mid-September;

Phase 3: Extreme Heat Event – Heat Advisory

Triggers

- NWS has issued a Heat Advisory.
- Temperatures meeting the criteria for a Heat Advisory are likely within the next 12 to 48 hours.

Surveillance

- DHMH will maintain situational awareness on vulnerable facilities.
- DHMH will continue to monitor syndromic surveillance systems and issue the weekly report outlined in Phase 2.
- DHMH and MEMA will continue to monitor NWS forecasts for any indication of Extreme Heat.
- MEMA will continue to monitor power outages.

DHMH Actions

- DHMH will notify the jurisdictions expected to be impacted by the extreme heat event.
 - The DHMH advisory will also be sent to other state agencies.
 - DHMH may alert the public via media outlets, websites and social media.
- DHMH will review Extreme Heat checklists and begin taking appropriate actions.
- DHMH will coordinate with MIEMSS to issue FRED alerts when appropriate.
- DHMH will coordinate with MEMA to maintain situational awareness and gauge the potential impact of the anticipated event.

Local Health Department Actions

- LHDs will report information regarding local facilities in crisis to DHMH.
- LHDs may notify local extreme heat planning partners, including DSS, Aging, EMA and Department of Fire and Rescue Services (DFRS).
- LHDs may consider activating any local cooling center plans and notify DHMH with a press release or Web link to the facility locations.

- EMAs should notify MEMA of these locations.
- LHDs may consider activating any applicable transportation assistance programs for vulnerable populations to be transported to cooling centers.
- LHDs may coordinate with EMAs to recommend heightening mitigation protections or to discourage outdoor public events.
- LHDs may review plans for extra staffing and emergency support services and stage potential resources.
- LHDs may coordinate with relevant organizations to provide outreach to vulnerable populations.
 - Coordinate with existing volunteers and partners for responding to extreme heat.
- LHDs may coordinate public messaging with public access numbers such as non-emergency dispatch, 211, 311 or using reverse 911 systems.

Public Information

- DHMH will coordinate with each jurisdiction on Extreme Heat Event communications.
- LHDs may consider providing all locally used call centers (911, 211, hospital and private ‘Ask a Nurse’ lines) information on cooling centers and transportation options.
- DHMH and LHDs will employ consistent messaging that urges individuals to check on elderly neighbors and family members.
- DHMH and LHDs will include pet emergency preparedness for heat-related illness prevention in messaging. Resources can be found at Ready.gov¹.
- Jurisdictions may utilize existing signage (such as outside firehouses, other public buildings or on public buses) to display concise heat safety tips.

Demobilization

- DHMH will revert to Phase 2 when the heat advisory has expired.

Phase 4: Extreme Heat Event – Excessive Heat Warning

Triggers

- The NWS has issued an Excessive Heat Warning.
- Temperatures meeting the criteria for an Excessive Heat Warning are likely within the next 12 to 48 hours.
- Temperatures meeting the criteria for a Heat Advisory are expected to continue for three or more days.

DHMH Actions

DHMH will take all the actions outlined in Phase 3: Extreme Heat Event – Heat Advisory and:

- DHMH will engage 211 as a public access number for heat-related questions and provide 211 with up-to-date public messaging materials.
- DHMH will conduct conference calls to discuss potential impact of event with stakeholders. The calls may include, but are not limited to:
 - Internal DHMH Staff

¹<http://www.ready.gov/america/getakit/pets.html>

- Local Health Department Staff
 - The Joint Operations Group
- DHMH will coordinate with MEMA in preparation for a potential Complex Heat Emergency.
- DHMH will supply local health departments with updated lists of licensed facilities for tracking.
- DHMH will recommend that DHR and MDoA update and monitor any lists of vulnerable nonmedical facilities, such as assisted living facilities.

Local Health Department Actions

- LHDs may provide DHMH with updated information on local cooling centers.

Demobilization

- DHMH will revert to Phase 2 when all heat-related advisories have expired.

Phase 5: Complex Heat Emergency

Triggers

- DHMH and MEMA will decide what conditions constitute a complex heat emergency, which may include, but are not limited to:
 - Significant power or water outages,
 - Extended Heat Waves lasting more than three days, or
 - Any other factors that would exacerbate a Heat Emergency.
- MEMA will escalate the State Response Operations Status Level as appropriate to facilitate interagency coordination.

Surveillance

- DHMH will begin issuing the Daily Heat-Related Illness Surveillance Report through the duration of the emergency at the discretion of the Deputy Secretary for Public Health.
 - The final Daily Report will be issued the day following the final Heat Advisory day, with surveillance data from the final extreme heat day.
 - The disbursement of death data will follow the prescribed flow of information due to the overwhelming number of requests for information during these events:
 - OCME death data will be routed internally to the Office of Preparedness & Response, DHMH.
 - Local Health Officers or their designee will be notified of the details of deaths occurring in their jurisdiction by DHMH.
 - The daily report will be sent to planning partners and posted to the DHMH website. The report will include the jurisdiction where the death occurred and age group and gender of the decedent. Details of death will not be included in the public report.

DHMH Actions

DHMH will take all the actions outlined in Phase 4: Extreme Heat Event – Excessive Heat Warning as applicable and:

- DHMH will conduct regular conference calls to discuss potential impact of event with stakeholders. The calls may include, but are not limited to:
 - Internal DHMH Staff
 - Local Health Department Staff
 - Joint Operations Group
- DHMH will coordinate with MEMA, DHR, MDoA, DDA, BHA, LHDs and other organizations as necessary to determine if facilities with vulnerable populations need additional assistance.
- DHMH will recommend that MEMA request information from local EMAs on public events that may be affected by the complex heat emergency.
- DHMH will coordinate with MEMA to activate widespread power outage plans as necessary.
- DHMH will coordinate with MEMA to decide if and when MEMA should assume incident command for the heat incident and begin coordinating Emergency Support Functions in support of response.
- DHMH will recommend that MEMA and Local EMAs coordinate with local emergency services to report any facilities encountered with excessively hot interiors that may pose a danger to residents.

Local Health Department Actions

- LHDs may notify EMAs of any large-scale public events known to the LHD that have the potential to result in a mass casualty incident.
- LHDs may consider applicability of requiring greater mitigation measures for outdoor public events.
- Jurisdictions may expand cooling center capacity as necessary.

Water Shortages

- In the event of a widespread and/or prolonged water shortage, local jurisdictions should consider providing alternative potable water to affected residents. Resources can also be requested through local EMAs.
- Local jurisdictions may consider requesting assistance from the private sector in providing and distributing water.

Power Outages

- In the event of a widespread and/or prolonged power outage, DHMH will coordinate with MEMA, the Public Service Commission and appropriate power companies to monitor power loss in vulnerable facilities.
- Pharmacy restrictions on the ability to renew prescriptions may be lifted.

Public Information

- MEMA may activate a Joint Information Center (JIC) to address public messaging.
- MEMA and DHMH, through the JIC (if activated), will use 211 or public access numbers to distribute heat emergency information.

- Local jurisdictions, MTA and SHA will utilize existing digital signage (such as outside firehouses, other public buildings or on public buses) to display concise heat safety tips.

Demobilization

- DHMH will revert to a previous phase once the complicating factors have been resolved as described below:
 - DHMH will revert to Phase 5 if an Excessive Heat Warning is in effect.
 - DHMH will revert to Phase 4 if a Heat Advisory is in effect.
 - DHMH will revert to Phase 2 if all advisories have expired.
- MEMA will de-escalate the State Response Operations Status Level

Phase 6: Post-Summer

The post-summer activities typically begin in mid-September and include After Action Reporting and planning for the next operational period.

Triggers

- Post-summer activities begin in September.

DHMH Actions

- DHMH will cease circulation of weekly heat reports in September.
- DHMH will collect After Action Reports from affected local jurisdictions and determine best practices to be included in the following year's planning efforts.
- DHMH will collect, analyze and release statewide surveillance data from the summer for use in future heat planning.
- DHMH will review and update the Extreme Heat Plan, including a comprehensive review of local plans and resources, to be completed and posted by May 1 of the following year.

Local Health Department Actions

- LHDs may cease heat-event monitoring and return cooling centers to normal hours as appropriate.
- LHDs may coordinate with DHMH on an annual heat plan review.
- LHDs may identify organizations serving high-risk populations to be utilized in the following season.
- LHDs may develop or revise information on high-risk individuals.
- LHDs may coordinate with local partners to identify lists of individuals and facilities considered vulnerable during a heat emergency.
- LHDs may conduct an evaluation of interventions:
 - Review evaluation tools to monitor effectiveness
 - Cooling center usage
 - Transportation program usage, if available

Definitions

Complex Heat Emergency – A Complex Heat Emergency is a condition of an Extreme Heat Event with complications requiring additional response. Examples of such complications are water or power shortages or an extended heat wave.

Cooling Centers – The actual definition of a ‘cooling center’ may vary among local jurisdictions. For the purposes of this plan, a cooling center refers to a building identified by local authorities with air conditioning and water. A cooling center does not necessarily provide medical services. Cooling center plans may identify general locations, such as public libraries or malls, where the local government recommends going to escape the heat, or designating locations, such as community centers with extended hours and bottled water.

Excessive Heat Warning – NWS issues an Excessive Heat Warning when the heat index is expected to exceed 110 degrees or conditions are such to pose a risk to life and property.

Excessive Heat Watch – These are issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A Watch is used when the risk of a heat wave has increased, but its occurrence and timing are still uncertain. A Watch provides enough lead time so those who need to prepare can do so, such as cities that have excessive heat event mitigation plans.

Extreme Heat Event – An Extreme Heat Event is a weather condition with excessive heat and/or humidity that has the potential to cause heat-related illnesses. An Extreme Heat Event is defined as a day or series of days when:

- NWS has issued a Heat Advisory or Extreme Heat Warning, or
- Weather or environmental conditions are such that a high incidence of heat-related illnesses can reasonably be expected.

Heat Advisory – NWS issues a Heat Advisory when the ambient temperature is expected to rise about 100 degrees Fahrenheit or the Heat Index is expected to reach 105 to 110 degrees. When determining the first Heat Advisory for the summer these thresholds may be lower.

Heat Index – The heat index is a measure of what the temperature actually feels like. The heat index is a combination of both the actual temperature and humidity, and is the best indicator for a pending Extreme Heat Event. The heat index is the key indicator of an Extreme Heat Event by the NWS.²

²<http://www.weather.gov/om/heat/index.shtml>

Heat-related Illness – A heat-related illness is a condition caused by extreme heat, usually dehydration, heat exhaustion, heat stroke or a medical condition exacerbated by heat events.

Heat Cramps – Painful muscle spasms in the abdomen, arms or legs following strenuous activity. The skin is usually moist and cool, and the pulse is normal or slightly raised. Body temperature is mostly normal. Heat cramps often are caused by a lack of salt in the body.

Heat Exhaustion – A condition characterized by faintness, rapid pulse, nausea, profuse sweating, cool skin and collapse, caused by prolonged exposure to heat accompanied by loss of adequate fluid and salt from the body.

Heat Stroke – A severe condition caused by impairment of the body's temperature-regulating abilities, resulting from prolonged exposure to excessive heat and characterized by cessation of sweating, severe headache, high fever, hot dry skin, and, in serious cases, collapse and coma. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

High-Risk Groups – High-risk groups are populations disproportionately affected by Extreme Heat Events. These groups include children and youth athletes, individuals who may be socially isolated (such as the elderly or those with psychiatric illness) and individuals with medical risk factors, such as alcoholism, cardiovascular or pulmonary disease, hypertension, diabetes or tobacco use.